# Can **EMREX** help 4EU+?

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University of Warsaw

4EU+ Mobilities: Digitalisation of Data Exchange

January 26th, 2021

# Agenda



- EMREX project
- EMREX architecture
- EMREX data transfer
- EMREX in Poland
- EMREX implementation in USOS
- EMREX in Norway (probably will be skipped)

# EMREX

## Field trial on the impact of enabling easy mobility on recognition of external studies

EU Erasmus+ KA3 project (2015-2017).

**Denmark**, **Finland**, **Italy**, **Norway**, **Sweden**
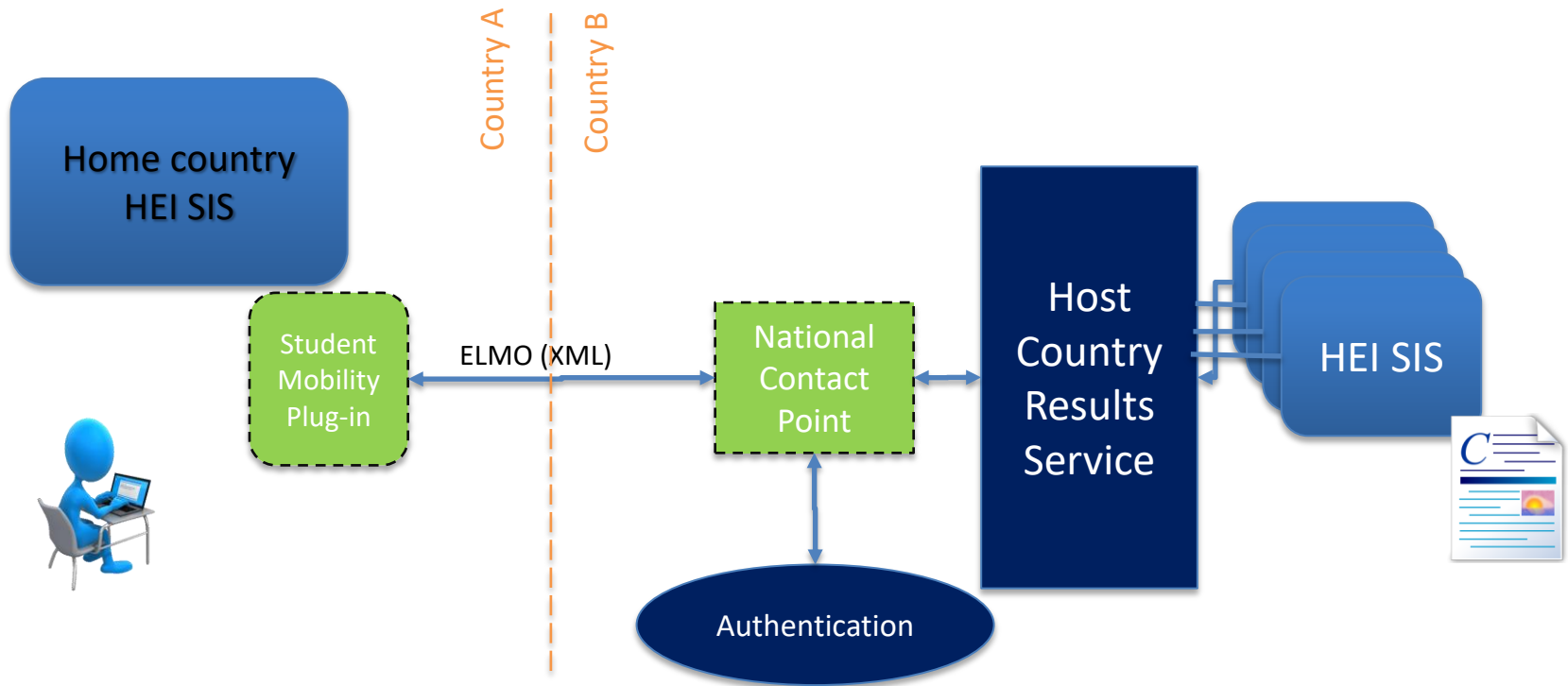
and **Poland**

- Building platform for an effective transfer of student achievements between partner institutions.

- Running field trial.

# EMREX Network

- Student achievements are described in a common data format **EMREX-ELMO** which has a status of an open semi-standard.

- Each partner adds **student mobility plug-in** and **EMREX Client** to local student information systems (**SIS**), sets up **national contact points** at country-level (or at institution-level) through which partner institutions may get access to data on student achievements.

- Data transfer is initiated by students.

- Authorization is required at home institution and host institution.

- Common software is open source and can be reused by new institutions.

- EMREX website: www.emrex.eu

- EMREX on GitHub: github.com/emrex-eu

# How it works?

Country A | Country B

Home country HEI SIS

Student Mobility Plug-in

ELMO (XML)

National Contact Point

Host Country Results Service

HEI SIS

Authentication

Student returning home can retrieve his achievement data electronically

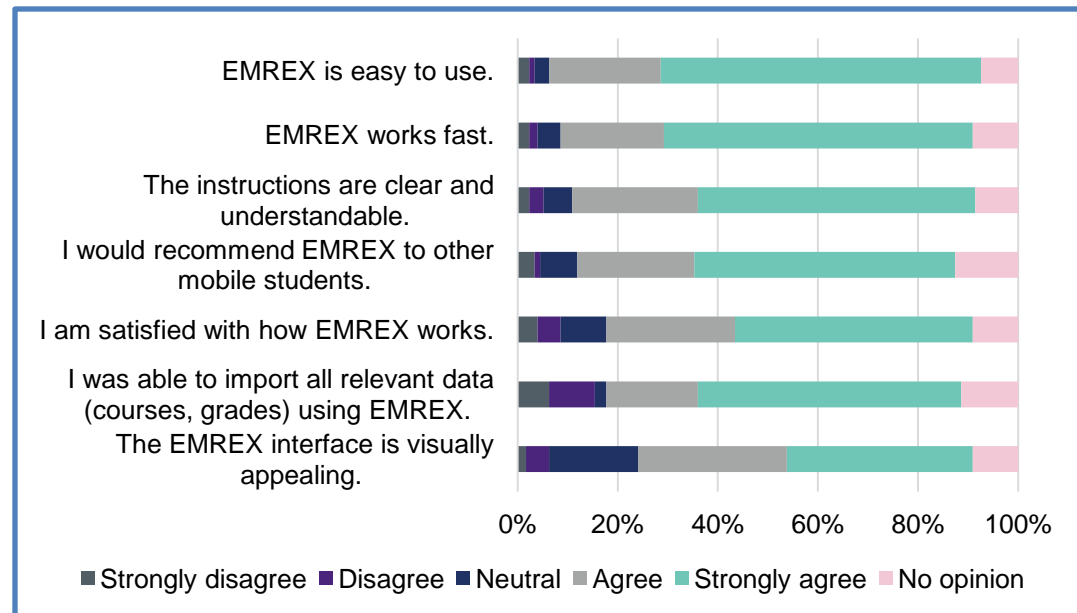# Survey at the end of the field trial (production systems)

## Would you use EMREX?



- No 6%
- I don't know 33%
- Yes 61%
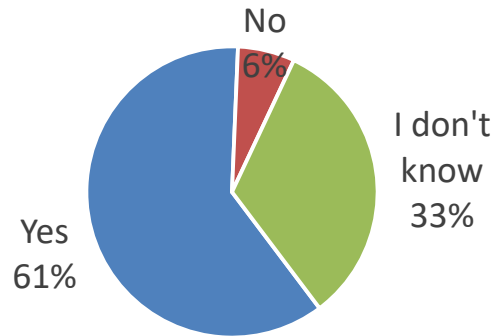
*"Very quick and straightforward to use"*

*"The courses etcetera are all in Swedish"*

*"I would like to see some extra information on courses"*

## User experience



| Statement | |
| --- | --- |
| EMREX is easy to use. | |
| EMREX works fast. | |
| The instructions are clear and understandable. | |
| I would recommend EMREX to other mobile students. | |
| I am satisfied with how EMREX works. | |
| I was able to import all relevant data (courses, grades) using EMREX. | |
| The EMREX interface is visually appealing. | |

Legend: ■ Strongly disagree ■ Disagree ■ Neutral ■ Agree ■ Strongly agree ■ No opinion

EMREX in Poland

# LIVE DEMO
## (if network works skip the following 7 slides)

Student Robert
from
the University of Warsaw
spent
summer semestr 2016
in
the Arctic University of
Norway

Student returns home after the last exam, no need to wait for the paper version of the transcript of records. At some moment student signs in to the student portal of the University of Warsaw.

Student clicks blue button **Start new import** Chooses Norway



USOSweb

NEWS | DIRECTORY | MY USOSWEB | **STUDENT'S SECTION** | STAFF SECTION | COMMON SECTION

University of Warsaw

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- POL-on
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- promotions
- dean's groups
- applications
- rankings
- applications
- stipends
- student mobility
- surveys
- payments
- diplomas

## Import your achievements data

| step 1 | step 2 | step 3 |
|--------|--------|--------|
| ● | ○ | ○ |
| Choice of country/institution | Export | Confirmation |

### Choose country and institution

| | |
|---|---|
| 🇩🇰 | Denmark |
| 🇫🇮 | Finland |
| 🇮🇹 | Italy |
| 🇳🇴 | Norway |
| 🇵🇱 | Poland |
| 🇸🇪 | Sweden |

University of Warsaw

You're using a **beta** version of the student mobility data exchange service.

This service is a part of an international project (EMREX) which is still in the stages of being developed and tested. If you encounter any technical problems please report it in your dean's office.

Student signs in using central authorization service in Norway



**Log in using Feide**

FEIDE

Feide is the chosen solution of the Department of Education for secure identification in the education sector Log in using Feide

FEIDE — Users from Norwegian universities and colleges

Log in using ID-porten with MinID, BankID, Buypass or Commfides

Diploma Registry 1.26 - 05.10.2017 10:32
www.vitnemalsportalen.no
Email: vitnemalsportalen@ceres.no
Read about our usage of cookies. ✕



English | Bokmål | Nynorsk | Sámegiella

**Login through Feide**

**Diploma Registry** has requested that you login. You have chosen **UiT The Arctic University of Norway** as your affiliation. Change?

| Username | r |
| Password | •••••••• |

Login

Forgot username or password?

Help          Privacy and cookies          More information

# Student is admitted to the Central Registry of student results in Norway, can see his achievements

Students confirms, chooses green button    Transfer records

# itnemålsportalen
diploma registry

## UiT The Arctic University of Norway

**Results** (30 ECTS)

| Course code | Course | Semester | Credits | | Grade | Grade distribution A B C D E ? |
|---|---|---|---|---|---|---|
| ENG-1016 | Introduction to English Sound Patterns | 2016 Autumn | 10 | ECTS | B | |
| PSY-1005 | Social psychology | 2016 Autumn | 10 | ECTS | E | |
| STV-1006 | Arctic Norway - Aspects of Politics, Government and International Relations | 2016 Autumn | 10 | ECTS | C | |

The document has been signed. You can now transfer the results.

Signed document with selected results (PDF)

NB: Some browser's internal PDF viewers do not show digital signature. In such cases, we recommend using Adobe Acrobat Reader.

☑ I confirm that these results will be transferred to https://usosweb.mimuw.edu.pl/kontroler.php?_action=dla_stud/studia/oceny/emrex/importujElmo

**Transfer records**    **Back**

Abort transfer

Diploma Registry 1.26 - 05.10.2017 10:32
www.vitnemalsportalen.no
Email: vitnemalsportalen@ceres.no

# and is back home, in Warsaw, with the list of courses ...



**USOSweb**

WARSZAWA

## University of Warsaw

**INTRODUCTION**

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- for courses
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- decisions
- promotions
- dean's groups
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- student mobility
- surveys
- payments
- diplomas

## Import your achievements data

✓ ELMO file has been imported correctly
Imported data come from the institution: UiT - Norges arktiske universitet

⚠ Data in the ELMO file does not match data in the database. List of inconsistencies:
- family name -

If you want, you can also preview the files being sent:

- PDF file (optionally digitally signed),
- EMREX-ELMO file (digitally signed).

### Courses not linked with any study program

| No. | Course | Academic term | Grades | Class | ECTS credits |
|-----|--------|---------------|--------|-------|--------------|
| 1 | Introduction to English Sound Patterns (en)<br>Innføring i engelske språklyder og lydmønstre (no)<br>ENG-1016-1 | 2016 Autumn (en)<br>2016 Haust (nn)<br>2016 Høst (no) | B | not available | 10 |
| 2 | Social psychology (en)<br>Sosialpsykologi (no)<br>PSY-1005-1 | 2016 Autumn (en)<br>2016 Haust (nn)<br>2016 Høst (no) | E | not available | 10 |
| 3 | Arctic Norway - Aspects of Politics, Government and International Relations (en)<br>Arctic Norway - Aspects of Politics, Government and International Relations (no)<br>STV-1006-1 | 2016 Autumn (en)<br>2016 Haust (nn)<br>2016 Høst (no) | C | not available | 10 |

Return

and the signed transcript of records which – according to law – is equivalent to the paper version signed by hand

# How EMREX works in Poland?

Warsaw (sending institution)

Cracow (receiving institution)

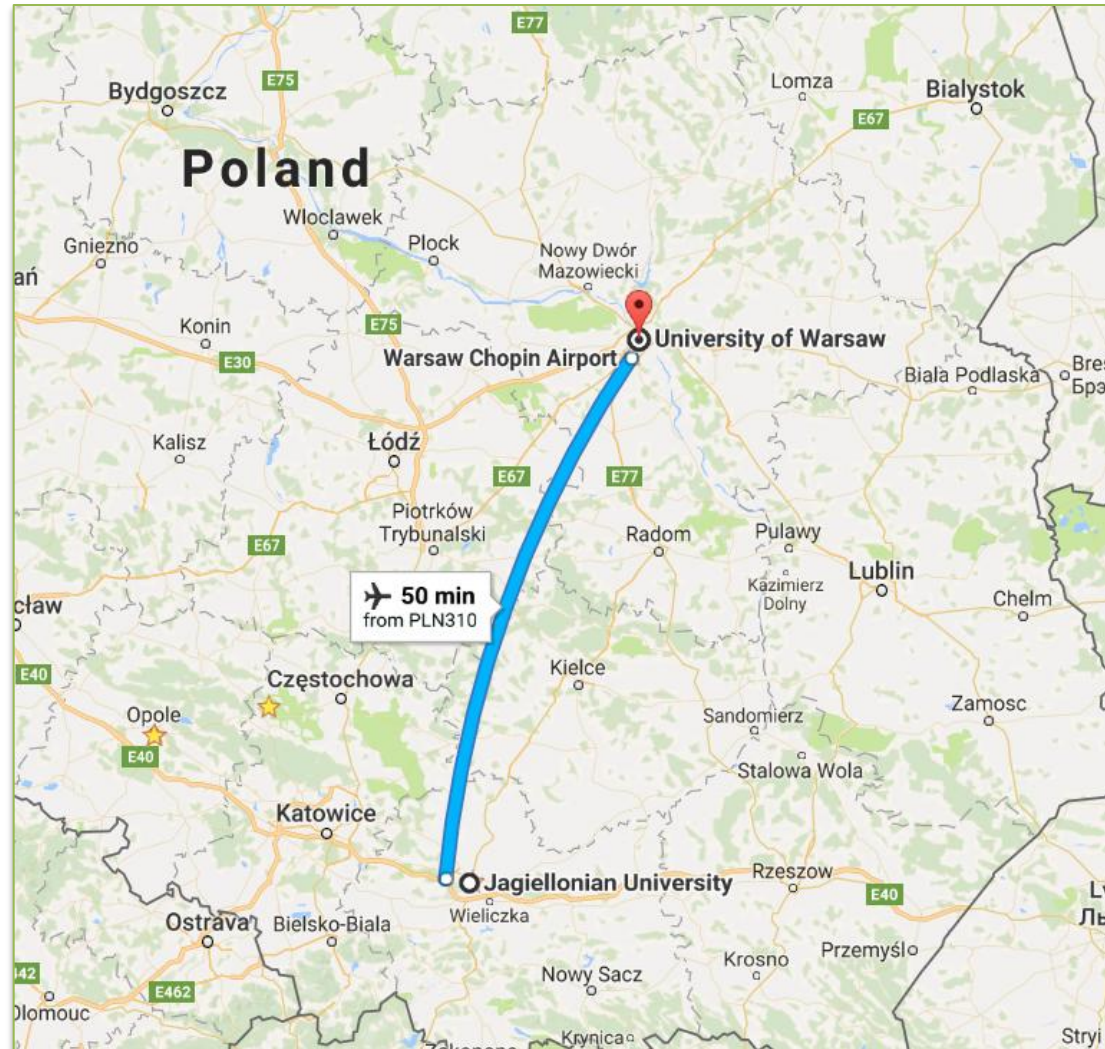ELMO (XML + PDF)

SMP

NCP

Sign in

Sign in

Student returning home to Polish HEI with USOS from another Polish HEI with USOS can easily retrieve his achievement data electronically

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# LIVE DEMO
## (if network works skip the following 8 slides)

Student Agnieszka
from
the University of Warsaw
spent
summer semestr 2016
in
the Jagiellonian
University in Cracow

Student returns home after the last exam, no need to wait for the paper version of the transcript of records. At some moment student signs in to the student portal of the University of Warsaw.

Student clicks blue button    Start new import    **Chooses Poland, then UJ**

# This is USOSweb in Cracow, student chooses sign in button

# Student signs in using central authorization service of the Jagiellonian University

# Student gets access to her achievements in Jagiellonian University



USOS web

NEWS | DIRECTORY | MY USOSWEB | **STUDENT'S SECTION** | STAFF SECTION | COMMON SECTION | CONTACT

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- diplomas
- obligations

UJ E-MAIL ACTIVATION

## Send your achievements data

i  Look out. You are about to send your personal data, along with some information on your grades, courses and study programs, to an external application.

This service is a part of an international project (EMREX) which is still in the stages of being developed and tested. If you encounter any technical problems please report it in your dean's office.

The report which we are going to send to the external application will include the information on your grades and other achievements related to the courses selected below.

The report will contain PDF file with your achievements. Choose the language for this document:
- ○ Polish
- ● English
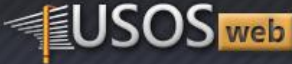
**2016/2017 summer semester**

| Course | Hours of classes | Grades ℹ | ECTS credits |
|---|---|---|---|
| (in Polish) Przekład audiowizualny WF.KBP64 | 30 hours CW | 4<br>n/a | 3 |
| Computer techniques for translators: CAT tools WF.KBP17 | 30 hours CW | 5<br>n/a | 3 |
| Global Understanding WF.KBP67 | 30 hours CW | 5<br>n/a | 3 |
| Introduction to Simultaneous Interpreting WF-IFG-MS9T-2L | 30 hours CW | CW: 4<br>n/a | 2 |
| Literary Translation II WF-IFG-MS8T-2L | 30 hours CW | CW: 4,5<br>n/a | 2 |
| Practical translation: German/Polish – informative & press texts WF.KBP12 | 30 hours CW | 4,5<br>n/a | 3 |
| Simultaneous translation WF.FEN-SM.O2.19 | 30 hours CW | CW: 3<br>n/a | 4 |
| Translation A↔B English (legal texts) WF.KBP53 | 45 hours CW | 4<br>34 (25) 41 | 3 |
| Translation C↔A German (legal texts) WF.KBP51d | 30 hours CW | 5<br>n/a | 3 |
| Translation of advertising texts WF.KBP65 | 30 hours CW | 5<br>n/a | 3 |

Sum of credits: **29**.

Continue | Cancel

# Student confirms export

**USOS** web

**Jagiellonian University in Kraków**

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UJ E-MAIL ACTIVATION

## Send your achievements data

⚠ Once you click the "Export" button, your personal data, including selected grades, courses and study programmes, will be sent to an external application.

If you want, you can also review the files being sent:

- PDF file (not digitally signed),
- EMREX-ELMO file (digitally signed).

CONFIRMATION

Jagiellonian University in Kraków is not related to the person or institution to which the report will be sent, and is not responsible for the way your data will be handled by the recipient. We recommend to continue only if you trust the page which has brought you here.

☑ I understand these warnings and want to continue (required)

[Export]    Cancel

Jagiellonian University in Kraków

You're using a **beta** version of the student mobility data exchange service.

This service is a part of an international project (EMREX) which is still in the stages of being developed and tested. If you encounter any technical problems please report it in your dean's office.

# and is back home, in Warsaw, with the list of courses ...



**USOS**web

NEWS | DIRECTORY | MY USOSWEB | **STUDENT'S SECTION** | STAFF SECTION | COMMON SECTION

University of Warsaw

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- student mobility
- surveys
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- diplomas

## Import your achievements data

| step 1 | step 2 | step 3 |
|---|---|---|
| Choice of country/institution | Export | Confirmation |

✓ ELMO file has been imported correctly

Imported data come from the institution: Jagiellonian University in Kraków

To complete the process, click "Apply" and provide the necessary data. You will be redirected to the survey.

ELMO file has been verified successfully.

If you want, you can also preview the files being sent:

- PDF file (optionally digitally signed),
- EMREX-ELMO file (digitally signed).

### Courses not linked with any study program

| No. | Course | Academic term | Grades | Class | ECTS credits |
|---|---|---|---|---|---|
| 1 | Global Understanding (en)<br>Komunikacja międzykulturowa w nowych mediach (pl)<br>WF.KBP67 | 2016/2017 summer semester (en)<br>Semestr letni 2016/2017 (pl) | 5 | Class (en)<br>Ćwiczenia (pl)<br>- 30 hours | 3 |
| 2 | Computer techniques for translators: CAT tools (en)<br>Narzędzia CAT (pl)<br>WF.KBP17 | 2016/2017 summer semester (en)<br>Semestr letni 2016/2017 (pl) | 5 | Class (en)<br>Ćwiczenia (pl)<br>- 30 hours | 3 |
| 3 | Przekład audiowizualny (pl)<br>WF.KBP64 | 2016/2017 summer semester (en)<br>Semestr letni 2016/2017 (pl) | 4 | Class (en)<br>Ćwiczenia (pl)<br>- 30 hours | 3 |

# and transcript of records in PDF and XML formats

Kraków, 28.11.2017

## TRANSCRIPT OF RECORDS

**INFORMATION ON THE STUDENT**
Surname:
First name(s): *Agnieszka*
Date of birth (day, month, year):
Student identification number or code:

**INFORMATION ON THE STUDIES**
Name of the programme: *Przekład i komunikacja międzykulturowa, stacjonarne drugiego stopnia*
Date of the beginning of studies: *01.10.2016*
Mode of study: *full-time;* Level of qualification: *second-cycle*
Field of study: *Linguistics*

Name of the programme: *MOST*
Date of the beginning of studies: *27.02.2017*
Mode of study: *full-time;* Level of qualification: *null*

**INFORMATION ON THE RESULTS GAINED**

| Courses by didactic cycles | Type/No. of hrs | Grade | ECTS |
|---|---|---|---|
| *2016/2017 summer semester* | | | |
| (WF.KBP17) Computer techniques for translators: CAT tools | cw 30 | 5 | 3 |
| (WF.KBP67) Global Understanding | cw 30 | 5 | 3 |
| (WF-IFG-MS9T-2L) Introduction to Simultaneous Interpreting | cw 30 | [4] | 2 |
| (WF-IFG-MS8T-2L) Literary Translation II | cw 30 | [4,5] | 2 |
| (WF.KBP12) Practical translation: German/Polish – informative & press texts | cw 30 | 4,5 | 3 |
| (WF.KBP64) Przekład audiowizualny | cw 30 | 4 | 3 |
| (WF.FEN-SM.O2.19) Simultaneous translation | cw 30 | [3] | 4 |
| (WF.KBP53) Translation A ↔ B English (legal texts) | cw 45 | 4 | 3 |
| (WF.KBP51d) Translation C ↔ A German (legal texts) | cw 30 | 5 | 3 |
| (WF.KBP65) Translation of advertising texts | cw 30 | 5 | 3 |
| | **ECTS in total:** | | 29 |

*Course code description*
*cw                class*
*Grades outside brackets are course grades, grades inside brackets are grades for the classes, vertical bar separates grades for various classes,*
*semicolon separates grades on various exam reports, space separates grades on the same exam report, order of grades on a report follows order of*
*exam sessions.*
*ZAL (zaliczenie) = non-graded pass, NZAL (niezaliczenie) = fail, — = no grade in the examination protocol.*
*ECTS credits: 1 full academic year = 60 credits.*

# EMREX in Poland – implementation

- Implementation of NCP, SMP and EMREX Client is spread across two USOS subsystems:
  - **USOS API** – a collection of web services, written primarily in Python, publicly documented in English, and designed for use by external consumers. NCP endpoints are implemented in USOS API installations.
  - **USOSweb** – a web portal used by all students and staff members in their daily academic activities, written primarily in PHP. Hosts EMREX Client.
- Every HEI in Poland which runs USOS has its own installation of USOS API and USOSweb subsystems.

# EMREX in Poland – implementation

- A user signs in to a local USOS installation and initiates the EMREX exchange on a dedicated USOSweb page.

- USOSweb fetches the list of NCP servers from EMREG via USOS API (USOS API is also responsible for caching EMREG responses).

- The student selects the NCP server on the USOSweb page, and then USOS API method is called with the server's URL.

- The user is redirected to the NCP URL with the return URL parameter referring back to a proper **receiver** USOS API **method**.

- Once the user accesses the NCP-related USOSweb web page, he is asked to sign in (second time).

**Logging to the NCP of the University of Warsaw**

# EMREX in Poland – implementation

- The user is presented with the list of courses and is allowed to select any subset of them.

- When the user clicks SEND, NCP response is constructed with the EMREX-ELMO document (communication with USOS API is done in the background).

- POST request is sent directly from user browser to the EMREX Client.



**Selecting results at the NCP of the University of Warsaw**

# EMREX in Poland – implementation

- The user is redirected to the home USOSweb subsystem and presented with the results of the EMREX-ELMO processing.

- The received EMREX-ELMO document is stored and verified.

- If the verification process goes well, and the local system is able to understand the data in the document, then it may additionally allow the student to select the courses which he would like to store locally (this being an extra option).

- Suspicious import requests would need to be approved by an authorized staff member (PDF document attached to EMREX-ELMO XML should be useful in this case).

```xml
-<elmo xsi:schemaLocation="https://github.com/emrex-eu/elmo-schemas/tree/v1 https://raw.githubusercontent.com/emrex-eu/elmo-schemas/v1/schema.xsd">
   <generatedDate>2016-05-07T09:22:56.477068+00:00</generatedDate>
  -<learner>
     <citizenship>PL</citizenship>
     <identifier type="nationalIdentifier">76070584616</identifier>
     <identifier type="usos:user_id">1633846</identifier>
     <identifier type="usos:student_number">1234245442</identifier>
     <identifier type="usos:other_document:P">DB1111111<
     <givenNames>Filip</givenNames>
     <familyName>Izdebski</familyName>
     <bday>1976-07-05</bday>
  </learner>
 -<report>
   -<issuer>
      <country>PL</country>
      <identifier type="pic">999572294</identifier>
      <identifier type="erasmus">PL WARSZAW01</iden
      <identifier type="schac">demo.usos.edu.pl</identifie
      <identifier type="usos:polon_id">UW</identifier>
      <title xml:lang="pl">Uniwersytet Warszawski</title>
      <title xml:lang="en">University of Warsaw</title>
      <url>http://www.uw.edu.pl/</url>
   </issuer>
  -<learningOpportunitySpecification>
      <identifier type="local">4018-WYK18E</identifier>
      <title xml:lang="pl">Historia kultury bizantyńskiej</tit
      <title xml:lang="en">History of Byzantine culture</titl
      <type>Course</type>
      <subjectArea>09200</subjectArea>
      <iscedCode>0231</iscedCode>
    -<url>
        https://usosweb.demo.usos.edu.pl/kontroler.php?_ac
     </url>
    -<specifies>
      -<learningOpportunityInstance>
         <start>2014-10-01</start>
         <date>2015-06-09</date>
        -<academicTerm>
           <title xml:lang="en">Academic year 2014/15
           <title xml:lang="pl">Rok akademicki 2014/1!
           <start>2014-10-01</start>
           <end>2015-06-09</end>
         </academicTerm>
         <resultLabel>3,5</resultLabel>
         <languageOfInstruction>pl</languageOfInstr
       </learningOpportunityInstance>
     </specifies>
```

```xml
     -<learningOpportunitySpecification>
         <identifier type="local">267126-1</identifier>
         <title xml:lang="pl">Wykład</title>
         <title xml:lang="en">Lecture</title>
         <type>Class</type>
       -<url>
           https://usosweb.demo.usos.edu.pl/kontroler.php?_action=katalog2/przedmioty/pokazZajecia&zaj_cyk_id=267126&gr_nr=
        </url>
       -<specifies>
         -<learningOpportunityInstance>
            <engagementHours>60.00</engagementHours>
          </learningOpportunityInstance>
         </specifies>
       </learningOpportunitySpecification>
     </hasPart>
   </learningOpportunitySpecification>
 -<learningOpportunitySpecification>
     <identifier type="local">4018-WYK16E</identifier>
     <title xml:lang="pl">Historia kultury europejskiego średniowiecza</title>
     <title xml:lang="en">History of culture in the European Middle Ages</title>
     <type>Course</type>
     <subjectArea>08000</subjectArea>
     <iscedCode>0220</iscedCode>
    -<url>
        https://usosweb.demo.usos.edu.pl/kontroler.php?_action=katalog2/przedmioty/pokazPrzedmiot&prz_kod=4018-WYK16E
     </url>
    -<specifies>
      -<learningOpportunityInstance>
         <start>2014-10-01</start>
         <date>2015-06-09</date>
        -<academicTerm>
           <title xml:lang="en">Academic year 2014/15</title>
           <title xml:lang="pl">Rok akademicki 2014/15</title>
           <start>2014-10-01</start>
           <end>2015-06-09</end>
         </academicTerm>
         <resultLabel>3</resultLabel>
         <languageOfInstruction>pl</languageOfInstruction>
       </learningOpportunityInstance>
     </specifies>
```

```xml
- <extension>
  - <metadata>
      {"usosapi": {"version": "6.1.2.0-a45188c-dirty (2016-05-05)", "base_url": "http://usosapps.demo.usos.edu.pl/"}, "more_information":
      "http://usosapps.demo.usos.edu.pl/developers/api/services/emrex/", "request_id": "yDTF2PQQk4dHA625j2WA"}
    </metadata>
  </extension>
- <ds:Signature>
  - <ds:SignedInfo>
      <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2006/12/xml-c14n11"/>
      <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
    - <ds:Reference URI="">
      - <ds:Transforms>
          <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
          <ds:Transform Algorithm="http://www.w3.org/2006/12/xml-c14n11"/>
        </ds:Transforms>
        <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
        <ds:DigestValue>JHRmdSW3sH2208syuO+9xeHfu5jTPgmBu3qSqEfNHKg=</ds:DigestValue>
      </ds:Reference>
    </ds:SignedInfo>
  - <ds:SignatureValue>
      u3zHNk+tgT0pXoYchKwx3AV+6BFlxcW3GXXNqfN8QzJOBXkxI7VHMOYQNdUBMeGc7uv6TIYBqn37m56lUy6pM8PGu5JCx4JX0vMtZ/ABXqc4OM
      /s549UAiJHZuvixZidGwY4gmWVg+omo43tleRMWov+LRAaR3wZ/gBlhuRMWNA=
    </ds:SignatureValue>
  - <ds:KeyInfo>
    - <ds:X509Data>
      - <ds:X509Certificate>
          MIICqzCCAhQCCQDJG6TJYHaYJjANBgkqhkiG9w0BAQsFADCBmDELMAkGA1UEBhMC
          UEwxEzARBgNVBAgMCINvbWUtU3RhdGUxEzARBgNVBAcMCtfDhMKFY2hvY2sxIDAe
          BgNVBAoMF1VuaXdlcnN5dGV0IFfDhMKFY2hvY2tpMRYwFAYDVQQDDA1yeWdpZWWxz
          a2kubmV0MSUwIwYJKoZIhvcNAQkBFhZyeWdpZWWpza2lAbWltdXcuZWR1LnBsMCAX
          DTE1MTEyMzE3MDIwNVoYDzIxMTUxMDMwMTcwMjA1WjCBmDELMAkGA1UEBhMCUEwx
          EzARBgNVBAgMCINvbWUtU3RhdGUxEzARBgNVBAcMCtfDhMKFY2hvY2sxIDAeBgNV
          BAoMF1VuaXdlcnN5dGV0IFfDhMKFY2hvY2tpMRYwFAYDVQQDDA1yeWdpZWWxza2ku
          bmV0MSUwIwYJKoZIhvcNAQkBFhZyeWdpZWWpza2lAbWltdXcuZWR1LnBsMIGfMA0G
          CSqGSIb3DQEBAQUAA4GNADCBiQKBgQDvNcS73egZh+bL9gasy7T2P9UfWeFIIWNe iM/q0+DK6TuZCn1LmidL
          /aD5AuuznL8jbPDfFBGMcCJoA78HQHkKb3ybrw+uDGyA JzdbAoiuzhVtOWlj7EOS4yAe3MjEVCr9si1zHymosTN1Icxowx+MZpSNy+EzvDdn
          JSjdTeG6LwlDAQABMA0GCSqGSIb3DQEBCwUAA4GBACy1iETp4hI7LM4kvktc65Iw
          dytV6wFapwGb7Rt1h/wWCR5BGpvDisRsqVaWJp7sKuGYydQ4GrdsYLEffEmtyUMn
          1fFYAC7dTd6hSqZPn90ZAXMRsNZN87vzrRQdrfLhs4Vp8hovtTvDVE7zfgWY/7wK /K7PodbFOqK8H/daalKC
        </ds:X509Certificate>
      </ds:X509Data>
    </ds:KeyInfo>
  </ds:Signature>
</elmo>
```

# Other issues

- Signatures – signing is done in backend without human interaction
  - Signing XML is easy (system certificate).
  - Signing PDF is more challenging since the signature should be recognizable by PDF readers.
- Grade conversion should be applied automatically if needed
- For some partners sending PDF may be easier than sending XML, so it may happen that these two documents are not equivalent.
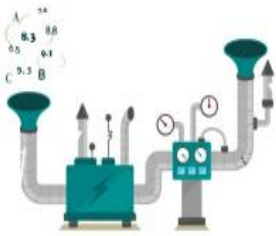
# Grade conversion made easy



## Grading Distributions Comparison

**Host Institution: University of Leon**     **Discipline: BACHELOR - 0112-Training for pre-school teachers**     **Awarded grade: [6.5-6.9]**

| Grade | [5-5.4] | [5.5-5.9] | [6-6.4] | [6.5-6.9] | [7-7.4] | [7.5-7.9] | [8-8.4] | [8.5-8.9] | [9-9.4] | [9.5-10] |
|---|---|---|---|---|---|---|---|---|---|---|
| Percentage | 10.81% | 7.76% | 14.78% | **12.34%** | 16.1% | 10.67% | 11.39% | 6.47% | 6.24% | 3.46% |
| Cumulative | 100% | 89.19% | 81.43% | **66.65%** | 54.32% | 38.22% | 27.55% | 16.16% | 9.69% | 3.46% |

60.49%
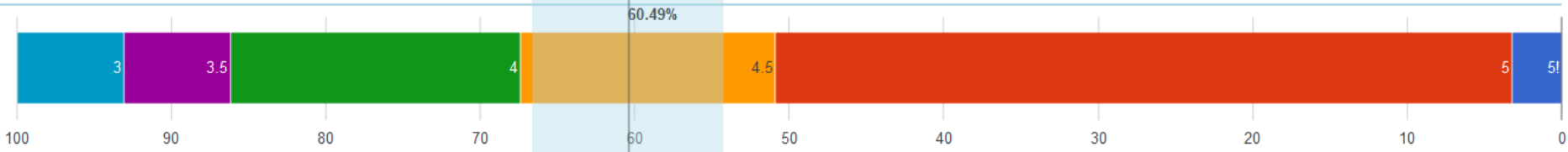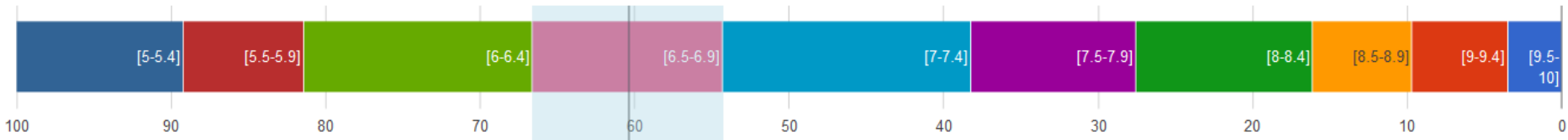
**Home Institution: University of Warsaw**     **Discipline: BACHELOR - 0112-Training for pre-school teachers**     **Suggested result grade: 4.5**

| Grade | ZAL | 3 | 3.5 | 4 | 4.5 | 5 | 5! |
|---|---|---|---|---|---|---|---|
| Percentage | 0% | 6.95% | 6.9% | 18.74% | **16.52%** | 47.66% | 3.23% |
| Cumulative | 100% | 100% | 93.05% | 86.15% | **67.41%** | 50.89% | 3.23% |

http://egracons.eu/

# Where else can EMREX help?

– Internal national mobility.
– Admission to educational institutions.
– Recruitment for jobs.
– Validation of degrees and diplomas.
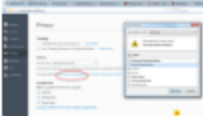– Informal learning.
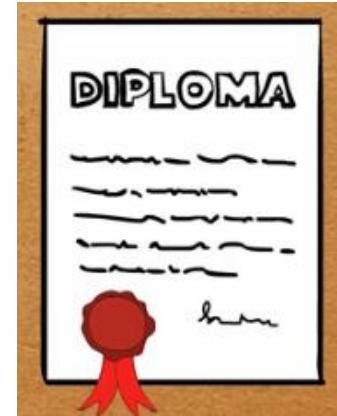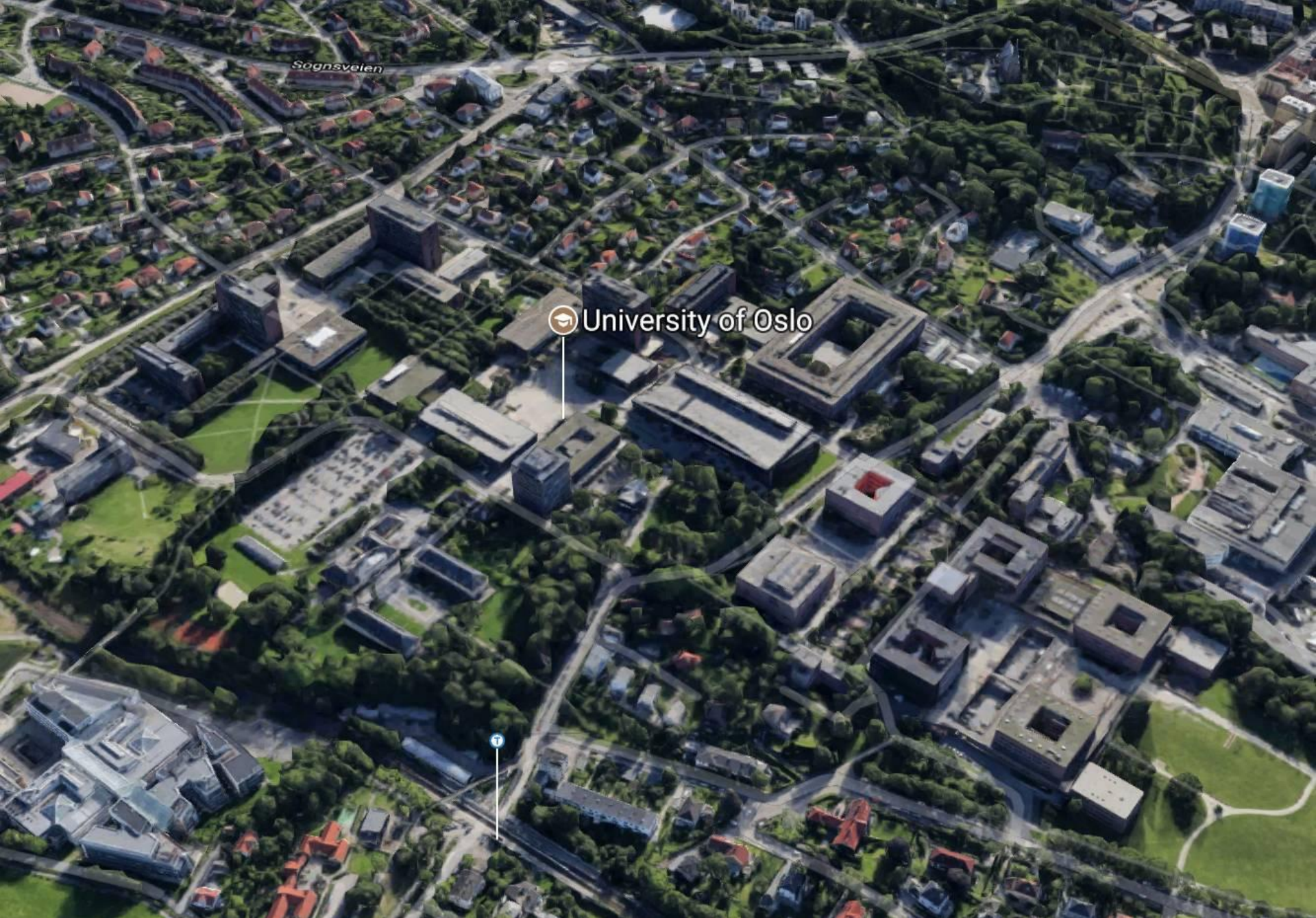
University of Oslo

EMREX in Norway

# EMREX in Norway

- Use of EMREX in Norwegian admission
  - Prerequisites to study programmes
    - Degrees
    - Courses
  - Admission criteria
    - Study points
    - Grades

# Admission web for applicants

# Use EMREX to retrieve results

Emrex sequence



**1** ──── 2 ──── 3 ──── 4

**Choose country**      Get results      Import results      Confirmation
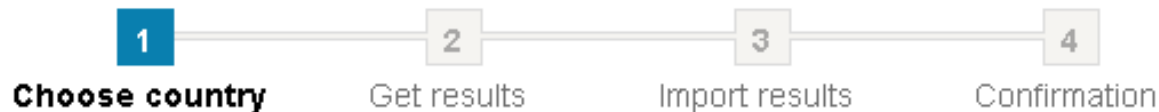
Here you can fetch results from another higher education institution in Europe. The results will be digitally signed by the issuing institution, and you will have the possibility to import them to Admission Web.
This process is part of EMREX, an international project for electronic transfer of student records between higher education institutions.

Choose country:

[Test] Finland

Go to chosen country
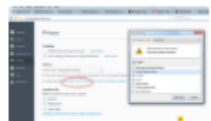
## Søknadsweb
University of Oslo-utv

# My Applications

**Master of Testing Term for admission Autumn 2015**

http://www.uis.no/forskning-og-ph-d-studier/forskerskolen-profres/opptak/ ↗

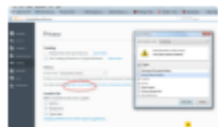| | |
|---|---|
| Application deadline | 05.05.2017 |
| Early Application Deadline | 21.12.2016 |
| Result will be published | 24.11.2016 |
| Documentation submission deadline | Please submit documents before 1. july 2017 |

✏ Change application

✖ Cancel application

📄 Receipt

| Priority | Code | Study | You have requested special assessment | Status |
|---|---|---|---|---|
| 1 | 1009 | Master of Trends | No | Under consideration |

39

# Søknadsweb
University of Oslo-utv

# External Results

This chart shows the results obtained from other Norwegian institutions, as of today. It will be updated when new imports are performed.

| Semester | Course | Result | ECTS |
|---|---|---|---|
| 2012 AUTUMN | Orjentoituvat opinnot (University of Tampere) | Bestått | 2 |
| 2012 AUTUMN | Tietotekniikkataidot (University of Tampere) | Bestått | 3 |
| 2012 AUTUMN | Ruotsin kielen kirjallinen ja suullinen viestint? (University of Tampere) | Bestått | 0 |

Import of results from abroad

UNIVERSITY OF WARSAW

# Process of data from EMREX

# Also for internal mobility

# EMREX in Norway

- Use of trustable, standardised and comparable data in the admission process

  – Simplify the process for the applicant

  – Simplify the process for the administrator

  – Improve quality

  – A more transparent process

MUCI

emrex

Erasmus+

UNIVERSITY OF WARSAW

# Q&A